

### REMARKS

The examiner rejected claims 21-27 under 35 U.S.C. 101, as directed to non-statutory subject matter.

Claim 21, as amended, is directed to statutory subject matter. Claim 21 recites that the method is executed in a computer system and further recites producing in the computer system a first set of seat availability queries \*\*\* evaluating in the computer system a quality measure \*\*\* and producing in the computer system a second set of seat availability queries \*\*\*.

Claim 21 now recites that the method occurs in a computer system and, therefore, claim 21 and dependent claims 22-27 are directed to statutory subject matter.

The examiner rejected claims 11-13 under 35 U.S.C. 112, second paragraph as being indefinite.

Claim 11, as amended, recites speculatively determining the travel options using availability data that is determined to be low-quality data as though the data were high-quality data. Independent Claim 1 recites evaluating data quality and claim 11 adds an additional limitation that the system may use data determined to be of low quality to speculatively determine the travel options. As amended, claim 11 is definite.

Claim 12, as amended, recites that the process produces low-quality answers, and the low quality answers are not returned from any external source of availability information but are guessed or computed internal to the travel planning process. Claim 13, as amended, recites that the travel options produced from speculatively determining are used to decide what additional seat availability queries should be issued, what sources should be queried, what quality data are needed, or what cost to incur to get additional information. As amended, claims 11-13 are now definite.

The examiner rejected claims 21, 22 and 26 under 35 U.S.C. 102(e) as being anticipated by Lynch '094.

Claim 21 is distinct over Lynch '094. The examiner contends that Lynch '094 teaches producing a first set of seat availability queries. Lynch '094 has no such teachings. In the passages cited by the examiner, Lynch '094 discusses inventory data or travel request information. However, Lynch '094 at Col., 4 lines 6-23, defines inventory data for air travel as:

Inventory data structure 18 includes inventory information obtained from one or more computer reservation systems 24 used by the travel agency. The customer reservation systems 24 provide travel service inventory information, such as airline flight, hotel, and rental automobile availability and rates. For airline flights, the inventory information may specify all flights between each particular city of departure and city of destination (otherwise known as a "city pair"), the arrival and departure times of the flights, the airline carriers providing such flights, a description of each flight as either direct or non-direct, the breakdown of all non-direct flights into separate legs or "segments," the identification of each segment of a flight as either domestic or international, the fare classes available on the flights, and pricing information (e.g., one-way ticketing, round-trip ticketing, city-to-city ticketing, or end-to-end ticketing) that can be used to determine the rates of various flights.

Lynch '094 at Col. 7 lines 8-21 sets out travel request data. Neither the travel request information nor the inventory data suggest producing in the computer system a first set of seat availability queries, to send to a first source of seat availability information for a first set of instances of transportation. Seat availability queries query for available seat counts on specific flights. Lynch does not perform seat availability queries and furthermore Lynch does not receive, process, store or teach any information about seat availability counts. Lynch cannot anticipate a claim that includes features of seat availability queries and seat availability counts.

Claim 21 also recites evaluating in the computer system a quality measure of seat availability information \*\*\* and producing in the computer system a second set of seat availability queries, to send to the first source or a different source of seat availability information based evaluating quality of the availability information to provide the set of instances of transportation for which a seat is available. The passages cited by the examiner deal with *inter alia* training the

disclosed genetic algorithms and trying to find alternative travel arrangements that satisfy business policies. However, Lynch '094 specifically does not describe evaluating a quality measure of seat availability information but is merely obtaining current inventory data, which as pointed out above is not seat availability data.

Lynch does not have a second set of queries which depends on the first. Lynch's schedule for retrieving travel solutions is fixed once a single time constant parameter is set before initiating the retrieval. Since the future schedule is predetermined, independent of information sent back in the solutions, it is clear that retrievals do not depend on the contents of the solutions sent to Lynch's system. Therefore, Lynch does not teach to use the characteristics of responses to direct future queries. That is, the time the last query was made is strictly a property of the Lynch's system not any of the solutions returned to the system, because Lynch's system retrieves data on a fixed schedule determined by the chosen time constant and not based on any properties of the solutions returned to the system.

Applicant submits Lynch'094 does not anticipate claim 21. Claim 22 is allowable at least for the reasons discussed in claim 21. Claim 26 also features that the sources of seat availability information generate seat availability information with differing quality properties including at least one of freshness, confidence, precision, and validity. Lynch '094 does not disclose these features.

The Examiner rejected claims 1-4, 11, 13, 15, 16, 19, 23, and 29-32, under 35 U.S.C. 103(a) as obvious over Lynch, U.S. Patent 6,119,094.

Applicants' claims 1-4, 11, 13, 15, 16, 19, 23, and 29-32, are distinct from Lynch '094. The Examiner contends that Lynch discloses (at column 2, lines 60-65: col. 6, lines 11-57 and col. 7 lines 46-49) a system to determine quality properties of availability information. However, in the cited passages Lynch discloses a system to update inventory data based on the age of the inventory data and, as set out above, the inventory data does not include the availability information as claimed. Therefore, Lynch '094 does not suggest determining how well the availability data meets certain parameters entered by the user and submits subsequent queries to one or more CRS's ... .

As discussed for claim 21, Lynch's query schedule is guided only by a property of Lynch's system, the time constant which is fixed in Lynch's system before retrieving any solutions. Lynch's query schedule is not determined, altered, or affected in any way by any data sent back in the solutions or by anything derived from that data. In particular, Lynch's system is completely insensitive to the availability information sent back to the system.

Claim 1 recites an availability process that can access seat availability information from multiple sources of seat availability information. Lynch neither describes nor suggests this feature. Lynch is not directed to the problem of how to determine seat availability on a mode of transportation, e.g., an airline flight. Rather, Lynch is directed to the problem of determining solutions to travel queries by finding flights and fares useable with the flights. (See Applicant's remarks of record.). In the "Response to Applicant's Argument," the examiner contended that:

**It is apparent that Applicant intends a particular definition and narrow interpretation with use of the term "seat availability information in the pending claims. It is further noted that the Applicant has attempted to provide support in the originally filed specification for a special definition of the term "seat availability information" in the current response. In particular, the Applicant points to a passage on the first page of the specification, which is also included in the response for the examiner's convenience.**

**However, the cited passage does not provide a definition of seat availability information," and uses exemplary, non-committal language to explain what sources of seat availability information may include (i.e., Sources of seat availability information include, but are not limited to (emphasis supplied by examiner). The use of such language in the specification fails to provide a special definition for a term. In the absence of a specific definition, the examiner must give the claim language the broadest reasonable interpretation and apply the art accordingly. (See MPEP 2111.01)**

The cited passage is again reproduced below:

**A travel planning system makes use of many classes of information including scheduling, faring, and availability data. The scheduling data describes where and when a passenger may travel; the faring data defines how much a given travel itinerary will cost; and the availability data describes the travel provider's willingness to sell the travel for the given cost. The availability data is often affected by the travel provider's capacity**

**and their prior sales of similar products at similar prices, and is analogous to a report on remaining inventory.**

**Sources of seat availability information include, but are not limited to, direct queries to external databases of seat availability information. Each source of availability information typically has associated fixed and marginal costs of obtaining information from that source, including computation, communication, time, and money. Further, each source may return answers with differing freshness, confidence, and validity properties.**

The examiner fails to properly construe seat availability data or information. Applicant clearly states that seat availability information is one of several types of data that a travel planning system makes use of, with scheduling and faring data being examples of other types. The scheduling data describes where and when a passenger may travel; the faring data defines how much a given travel itinerary will cost; and the availability data describes the travel provider's willingness to sell the travel for the given cost.

The definition of seat availability data does not use non committal language contrary to the position of the examiner. The non-committal language used by the applicant in the cited passages is directed to the sources of seat availability information, which include, "but are not limited to," direct queries to external databases of seat availability information.

Applicant has not fashioned a special definition for seat availability information, but rather uses a term as the industry uses it e.g., a mapping from booking code to seat count (for some identified service). Applicant's claims and specification, use that term in discussing a specific situation regarding whether a seat will be made available on a flight; in contrast to the overarching underlying task of determining a travel itinerary complete with fares to use on specific flights. The examiner must give plain meaning to the words used in Applicant's specification and claims.

Thus, as can now be recognized by the examiner, Lynch '094 does not address seat availability information, and thus does not suggest an availability process that ... uses results from a first source of the multiple sources of seat availability information ... to determine a set of instances of transportation ... determines quality properties of the availability information from the first source of seat availability information; and determines, based on the quality properties, whether the first source of seat availability information is reliable, and if the results

are not reliable, the availability process executes a second set of seat availability queries to the first source or a different one of the multiple sources of seat availability information based on the outcome of determining quality properties, to provide a second set of instances of transportation for which a seat is available.

Lynch '094 references to "available" is not directed to determining seat availability information, but rather, existence of flight/fare data that can be used to form priced itineraries. However, the priced itineraries that Lynch retrieves do not contain the seat availability information that would be needed to answer availability queries.

Applicants' claims 2-4, 11, 13, 15, 16, 19, 23, and 29-32, are distinct from Lynch '094 generally for the reasons discussed above and of record.

The Examiner rejected claims 5-8, 10, 18, 20, 25 and 27 under 35 U.S.C. 103(a) as being unpatentable over Lynch et al., U.S. Patent 6,119,094 in view of Lynch et al., U.S. Patent 5,839,114.

These claims are distinguished from Lynch '094 and '114, for instance, since neither Lynch '094 nor Lynch '114 separately or in combination suggests the features of Applicants' claim 1, as discussed above. Moreover, neither Lynch '094 nor Lynch '114 separately or in combination describes or suggests that different sources of predicted seat availability information have differing fixed and modular costs associated with obtaining information, as recited in claim 5. Similarly, claims 6-8, 10, 18, 20, 25 and 27 are distinct over Lynch '094 and Lynch '114, for the reasons of record.

The Examiner rejected claims 9, 17 and 24 under 35 U.S.C. 103(a), as being unpatentable over Lynch '094 in view of Walker, U.S. Patent 5,897,620.

Claim 9 distinguishes by reciting that the source of seat availability information is a source of predicted availability information that generates replies with differing quality properties including at least one of freshness, confidence, precision, and validity.

Walker does not teach prediction of seat availability information. Rather, Walker mentions an RMS (revenue management system) and uses that RMS system to provide seat

availability data. A RMS system is a system that supplies actual seat availability information, typically in response to a query posed to the system. In Applicant's claim 9, the claimed source that predicts availability information forms a prediction of how an RMS system will respond to a query. That is, Claim 9 uses a source of predicted availability information as a way to predict how the RMS system mentioned in Walker, would answer a given query for seat availability information. Hence, claims 9, 17, and 24 further distinguish over Lynch and Walker.

A RMS uses forecasts of demand. However, demand forecasting is entirely distinct problem from predicting availability information. Demand is a property of the traveling public while availability information is a property of an airline's analysts and its computer system. These are different concepts and predicting one is completely different from predicting the other.

The Examiner rejected claims 12 and 33-34 under 35 U.S.C. 103(a) as being unpatentable over Lynch '094 in view of Hornick, U.S. Patent 5,270,921.

Claim 12 is directed to the situation where low-quality answers are \*\*\* guessed or computed internal to the travel planning process. This feature is not described or suggested by the combination of references. Hornick, as with Lynch '094, does not speculatively produce low-quality, availability data and are not returned from any external source of availability information but are guessed or computed internal to the travel planning process.

Hornick as with Lynch discusses forecasting demand as in an RMS system, as discussed above.

The Examiner rejected claim 14 under 35 U.S.C. 103(a) as being unpatentable over Lynch '094 in view of Slotznick, U.S. Patent 5,983,200.

Claim 14 is distinct from Lynch taken separately or in combination with Slotznick for the reasons mentioned in conjunction with claim 1. The Examiner admits that Lynch does not suggest this feature and Applicant contends that Slotznick neither describes nor suggests an intelligent client for processing and integrating scheduling and fare information and availability data in a travel planning system.

The Examiner rejected claim 28 under 35 U.S.C. 103(a) over Lynch in view of Official Notice.

The Examiner considers that confidence levels are commonly used in "mathematic/probability calculations" and that it would have been obvious to include confidence levels in the calculations performed by Lynch '094."

Clearly, combining the so-called Official Notice teachings with the teachings of Lynch does not suggest Applicant claimed invention because Lynch does not perform calculations that determine seat availability. Therefore, whether or not the examiner's use of Official Notice is correct, the alleged combination does not suggest Applicant's claimed invention.

In addition, however, Lynch teaches to retrieve data from CRS's. Hence, the data is what the data is. It is also, not seen how a system described by Lynch would use confidence levels. The confidence levels cannot improve the accuracy of the obtained data, and since Lynch does not test the data but merely determines staleness of the data on a set or fixed schedule, confidence levels would not be of any use to the system taught by Lynch '094.

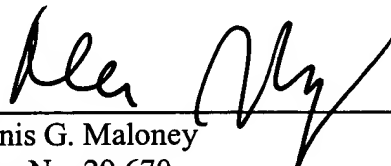
In view of the above, it is submitted that all of the claims are allowable and allowance is requested.

Enclosed is a \$1020 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date:

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